Abstract

In order to compensate for a drop in sensitivity at high rotational speeds, an acceleration sensor having an inductive measuring head (T) which cooperates with a moving Ferraris disk (F) essentially over a main magnetic field and which supplies an acceleration-dependent variable (Vdet; Vα) is expanded by an additional DC magnetic field excitation circuit (13, 14, I_K, R_K) with a means for driving the latter with the effect that the additional DC magnetic field acts in a compensating fashion on an eddy-current DC field, starting from a relatively high rotational speed (ω) of the Ferraris disk (F). This can be performed by amplifying the main magnetic field or by reducing the eddy-current DC field. A control signal (Vω), dependent on rotational speed, which both can be generated outside the sensor via a characteristic curve, and can be derived in the form of a control loop from the sensor signal (Vα), serves as a drive.

Figure 4